AGENDA ITEM 8

TRANSPORT FOR LONDON

SAFETY, HEALTH AND ENVIRONMENT ASSURANCE COMMITTEE

SUBJECT: LONDON UNDERGROUND SAFETY INCIDENT UPDATES

DATE: 1 DECEMBER 2010

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1 INTRODUCTION

1.1 This paper provides the Committee, and the Rail and Underground Panel whose Members will attend the Committee meeting for this agenda item, with an update on the investigation into the near miss safety incident on the District line, which was reported to the TfL Board at its meeting on 22 September 2010.

1.2 This paper also provides an update on incidents where the Office of Rail Regulation (ORR) has and is prosecuting London Underground (LU) for alleged breaches of the Health and Safety at Work Act.

1.3 The Committee is asked to note the paper.

2 SIGNALLING IRREGULARITY AT PLAISTOW

2.1 The Formal Investigation Report (FIR) into this incident, which occurred on 8 September 2010, is expected to be completed in January 2011. Thorough investigations, which get to the root causes of such rare events, are essential to ensure that the risks of recurrence are minimised by accurately targeted action. It is thus vital to allow sufficient time for the relevant experts, in this case signalling engineers, to explore all possible reasons for this highly unusual incident. In the meantime, an update on the investigation to date is included as Appendix 1.

2.2 The Rail Accident Investigation Branch (RAIB) is not conducting an investigation into this incident, but will review LU's FIR when it is completed. The ORR is conducting its own investigation and may, in due course, decide to take further action against LU regarding this matter.

2.3 This FIR will be considered by the London Underground Director's Risk Assurance and Change Control Team in due course and will be reported to the Committee as part of the next LU Quarterly HSE Performance Report.

3 MILE END INCIDENT UPDATE

3.1 This incident occurred at Mile End station on 17 November 2009, when a partially detached and damaged inter-car canvas barrier between two cars of a moving Central line train struck three women standing on the platform. Two of the women needed hospital treatment for facial injuries. LU pleaded guilty to a breach of section 3(1) of the Health and Safety at Work Act at the Magistrate's Court hearing on 5 November 2010 and was fined £5,000. ORR's costs of £4,017.48 were awarded against LU.

4 CANNON STREET INCIDENTS

4.1 In the summer of 2009, seven customers fell and injured themselves, all in separate incidents, on the stairway down from street level into Cannon Street Underground station. No changes to the entrance or stairs had occurred but building works in the adjacent mainline railway station increased the volume of people using this entrance, which is thought to have led to these falls occurring. No problems had been recorded in many previous years of use. LU put work in hand to address the problem but the ORR became dissatisfied with progress and issued an Improvement Notice requiring LU to do what it had already planned to do. Further details are set out in Appendix 2.

4.2 On 4 November 2010, ORR notified LU that it intends to prosecute LU for a breach of section 3(1) of the Health and Safety at Work Act.

4.3 In its Annual Report, published in July 2010, the ORR commended LU's safety performance. LU is disappointed that the ORR has chosen to prosecute LU in this case, especially as LU had initiated action to deal with the problem once it had been detected.

5 RECOMMENDATION

5.1 The Committee is asked to NOTE this paper.

6 CONTACT

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APPENDIX 1

Update on the Formal Investigation into the Signal Irregularity at Plaistow 8 September 2010

1 On 8 September 2010, the eastbound Circle and Hammersmith train 227 was requested to reverse using the bay road platform at Plaistow station. This is a routine move and train 227 was the first train of the day to reverse at this location. The Signal Operator set the correct signal and points configurations for the routes in and out of the platform. As train 227 exited westbound from the Plaistow bay road platform under a green signal, the points ahead of the train (seven points) moved and directed train 227 onto the eastbound road travelling westbound. Train 227 stopped one trains length beyond seven points, by a combination of an emergency brake application by the Train Operator and the signalling system.

2 There were no injuries or damage to LU assets. Initial investigations on site confirmed that a signal irregularity had occurred and a LU Formal Investigation was commissioned. Train 227 was approximately 80 metres from seven points when the points moved and at least 400 metres from the stationary train ahead on the eastbound road. In these specific circumstances, additional signalling irregularities or breaches of the LU Rule Book would have been required for a collision or derailment to occur.

3 The Office of Rail Regulation (ORR) and Rail Accident Investigation Branch (RAIB) were both notified but did not attend site. The ORR is conducting its own investigation while the RAIB will conduct an ‘industry review’ of the completed LU formal investigation report.

4 LU employees had undertaken signalling works at Plaistow in the nights prior to the incident. The signalling works are integrating a new siding into the existing signalling system. This is achieved through the use of ‘plate racking’ that enables switching between old and new circuitry during the works. Connector plugs are used to engage either the old or the new circuitry; it should not be possible to have the two circuits engaged together. Plate racking is common in the rail industry and has been successfully used on other LU projects. Plate racking makes effective use of available testing time and significantly reduces the safety and reliability risks associated with repeatedly connecting and disconnecting wires during testing and changeover.

5 The plate racks found in the interlocking machine room at Plaistow had an additional sliding contact that LU does not use in its plate racking. The combination of a plug and a sliding contact being present resulted in both the old and new circuits being engaged at the same time. The movement of the train under these conditions caused the signalling system automatically to reset prematurely and seven points to return to their normal position in advance of the train. The signalling works from the previous night were not fully tested prior to the start of traffic. A LU safety alert has been issued clarifying under what circumstances a full circuitry test is required by a Signal Engineer.

6 Immediately following the incident, all plate racking was quarantined in the stores and works suspended at Plaistow. All locations where plate racking was being used were inspected and it was confirmed that no plate racks with sliding contacts were present. A new team is completing the works at Plaistow.

7 The formal investigation is focusing on how the plate racking with sliding contacts came to be present within LU and at what point in the procurement process the sliding contact should have been removed. The works are being reviewed to determine if they were completed to plan, with particular regard to decisions concerning the level of testing required.

8 The formal investigation report is scheduled to be submitted to the LU Directors Assurance and Change Control Team in January 2011.

APPENDIX 2

Falls on Stairs at Cannon Street Station in 2009

1 The entrance to the Underground station from Cannon Street used to comprise a step up from the pavement and then a flight of stairs down into the station. The 'step-up' was painted yellow. This arrangement had existed for many years and had not caused any reported problems.

2 In early 2009, Network Rail started major refurbishment works to its mainline station next door to the Underground station. While these works did not physically affect the Underground entrance in question, the works had the effect of increasing the flow of passengers into the Underground station via this entrance.

3 Between 7 June and 24 September 2009, seven falls occurred on the stairway resulting in various injuries. The injury that occurred on 7 June involved a fractured nose and a 'possible fractured skull' (according to the paramedics who attended). The injury that occurred on 24 September was similar in seriousness, while the injuries incurred in the intervening five incidents were less serious.

4 Following the seventh fall on 24 September, it was decided that warning signs and repainting the 'step-up' were insufficient measures to prevent recurrence and that the pavement outside the station, owned by the City of London, needed to be altered to eliminate the step up into the station. This entailed getting the City of London's permission to do the pavement works and LU agreeing that City of London would not carry responsibility for any falls on the LU staircase that might result from the changes made to the pavement. This took a few weeks to organise and the work was booked to be undertaken on Saturday night/Sunday 31 October/ 1 November 2009, because Cannon Street Underground station is normally closed on Sundays.

5 Unusually, however, Cannon Street Underground station had to remain open on Sunday 1 November because Charing Cross mainline station was to be closed for engineering work and its trains terminated at Cannon Street mainline station instead. This fact had not been known by those arranging the work to the pavement at the Underground station entrance and, as a result, the work was postponed. Mitigation of extra staff posted at the top of the stairs to warn customers of the tripping hazard was put in place during station opening hours. Despite this and the situation being explained to them, the ORR issued an Improvement Notice (IN) on 4 November 2009, requiring that the works to the pavement be done.

6 The works to the pavement, which had to be rearranged and agreement confirmed with the City of London were then successfully carried out on Saturday night/ Sunday 21/22 November 2009. The IN was subsequently confirmed with the ORR as satisfactorily closed out. There have been no further reported injuries on these stairs.

7 It should be noted that around 80 to 100 falls which result in customer major injuries (as defined in RIDDOR (Reportable Injuries Diseases and Dangerous Occurrences Regulations) occur each year on LU stairs and escalators. All such falls are investigated but it is rare that any defect causes such accidents which are usually attributable to customer behaviour.